

C. KROHN.
 PROPELLING DEVICE.
 APPLICATION FILED JAN. 12, 1911.

992,676.

Patented May 16, 1911.

Fig:1.

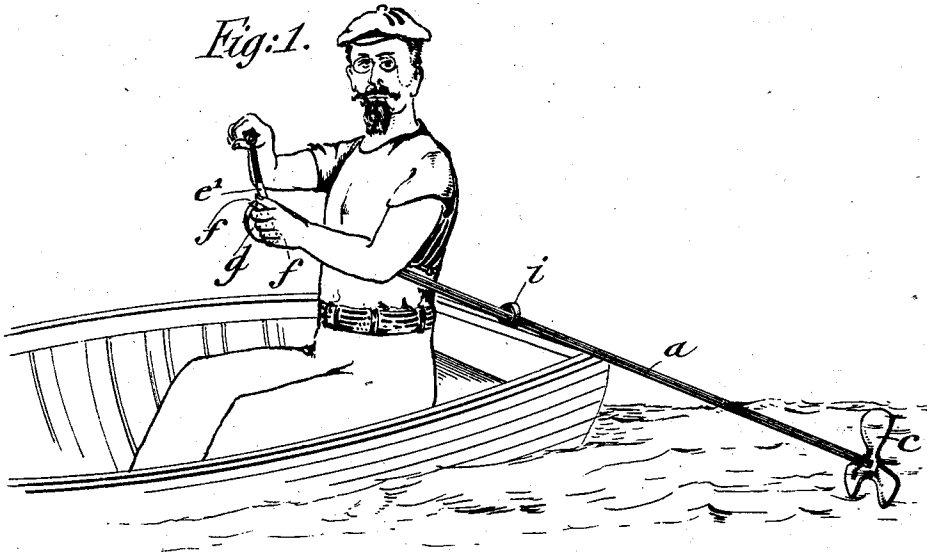


Fig:2.

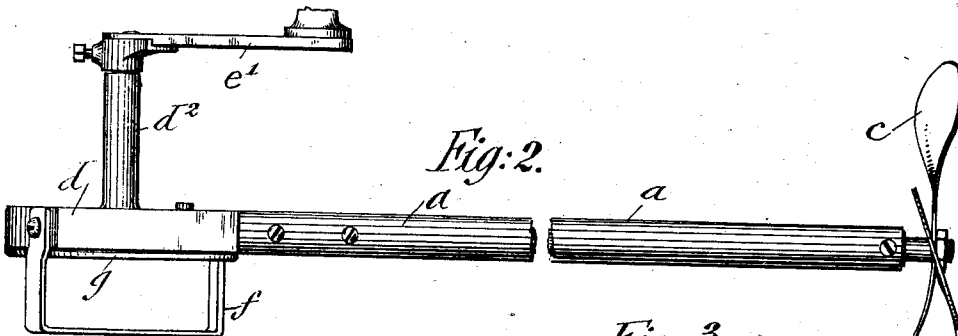


Fig:3.

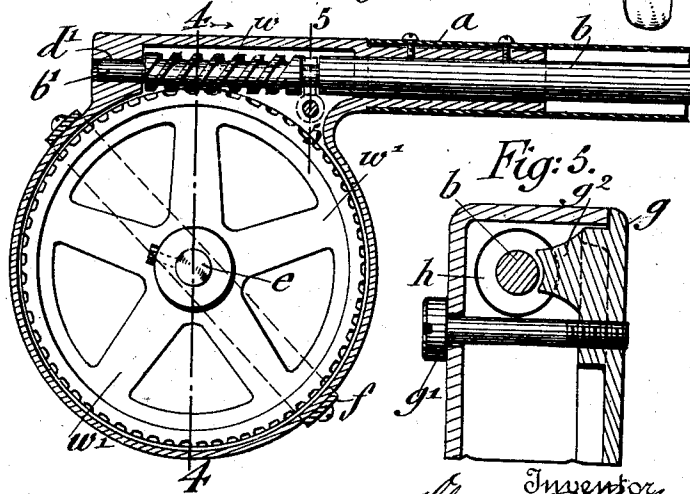


Fig:4.

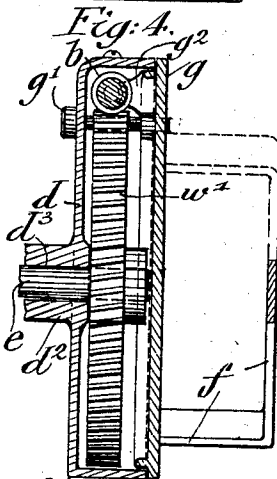
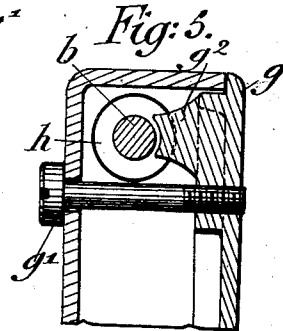


Fig:5.



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UNITED STATES PATENT OFFICE.

CHRISTIAN KROHN, OF NEW YORK, N. Y.

PROPELLING DEVICE.

992,676.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed January 12, 1911. Serial No. 602,283.

To all whom it may concern:

Be it known that I, CHRISTIAN KROHN, a citizen of the United States of America, residing in New York, in the borough of
5 Manhattan, county and State of New York, have invented certain new and useful Improvements in Propelling Devices, of which the following is a specification.

This invention relates to an improved propelling device which can be used either for swimming purposes or for use in propelling a boat, the improvement being more specifically designed for simplifying and rendering more effective the propelling device for
10 which Letters Patent No. 965,912 were granted to me on August 2, 1910; and for this purpose the invention consists of a propelling device comprising a tubular supporting-rod, a casing secured to the forward end
15 of the tubular rod and provided with a handle-bail, a worm-gear in the said casing, a crank-handle attached to said worm-gear, a shaft passing through the tubular rod into the casing and provided with a worm at
20 the forward-end intermeshing with the worm-gear, a propeller at the rearward end of the shaft, a cover for closing the casing, and means for holding the cover tightly on the casing, as will be fully described herein-
25 after and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view showing my improved propelling device in use for propelling a boat, Fig. 2 is a plan-view of the same, Fig. 3 represents a detail of the driving mechanism for the propeller-shaft with the cover removed, Fig. 4 is a vertical transverse section on line 4, 4, Fig. 3, and Fig. 5
30 is a vertical, transverse section on the line 5, 5 of Fig. 3.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

Referring to the drawings, *a* designates a
45 tubular rod provided at its ends with bearings in which rotates the propeller shaft *b*. The upper end of the propeller shaft extends beyond the tubular rod and is provided with a worm *w* and an end bearing spindle *b*¹; while the lower end of the shaft is provided
50 with a screw-propeller *c*. The upper end of the tubular rod *a* has secured thereto the casing *d* inclosing the worm *w* and provided with a bearing *d*¹ for the spindle *b*¹, and
55 also with a central hub *d*² provided with a

bearing bore *d*³. In this bearing bore *d*³ is rotatably mounted a wheel shaft *e* provided with a crank-handle *e*¹ and on which is mounted the gear-wheel *w*¹ in the casing *d* and intermeshing with the worm *w*. To the
60 casing *d* is attached the handle-bail *f* for aiding in holding the propelling device with the left hand while the right hand turns the crank-handle *e*¹.

The casing *d* is tightly closed by a cover
65 plate *g* said plate being held thereon by fastening screws *g*¹, whereby ingress of dust and water and egress of lubricating materials are prevented, thus keeping the gears
70 and bearings clean and well lubricated.

The propeller shaft *b* is provided at its forward end inside the casing *d* with a circumferential groove *h* in which engages a
lug *g*² cast integral or suitably secured to the cover-plate *g*, and thus prevents endwise
75 movement of the propeller-shaft.

When the propelling device is used for swimming purposes it is supported on a belt between the left-hand side of the body and left arm, the belt being passed over the
80 right-hand shoulder. When the propelling device is held by one hand and the crank-handle turned forward by the other hand the body is propelled forward through the water, and when the motion of the crank-
85 handle is reversed the body is moved in backward direction. It is preferable to use in connection with the propelling device, a swimming-vest so that the body is supported
90 in upright position and propelled in forward and backward direction through the water, permitting thereby the use of the same as a swimming or supporting machine, even by those who have not learned to swim.

When the propelling device is to be used
95 with a boat, the tubular rod is supported in a swivel ring *i* at the stern of the boat and the body propelled by the actuation of the propelling device in the same manner as when driven by the usual type of screw
100 propeller. When two persons, each provided with a propelling device, desire to propel the boat, the swivel rings have to be arranged at both sides of the gunwale near the stern of the boat. This permits the forward
105 propulsion of the boat either by one or two propellers, while the person or persons are sitting in the boat looking forward in the direction of the motion of the same.

Having thus described my invention, I 110

claim as new and desire to secure by Letters Patent:

1. A propelling device comprising a tubular connecting rod, a casing at the forward end of the same, a shaft supported in bearings in said tubular rod, a propeller at the rearward end of the shaft outside of the tubular rod, a stationary shaft attached in the casing, a worm gear on the shaft, a worm in the tubular rod, and at right angles to the shaft of the worm gear, and a handle for operating the worm gear.

2. A propelling device, comprising a tubular supporting rod, a shaft supported in bearings of said tubular-rod and having a groove in its upper end, a propeller attached to the rearward-end of said shaft, a casing at the forward-end of the tubular-rod, a worm on the propeller shaft inside of

said casing, a worm-gear in the casing intermeshing with said worm, a crank-handle attached to the center of the worm-gear, a stationary handle-bail attached to the casing at the side opposite to the crank-handle, a cover for said casing, fastening-screws for holding the cover tightly on the casing, and a lug on said cover and engaging in said groove of the propeller shaft adjacent to the worm for preventing longitudinal shifting of the shaft in the tubular-rod.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

CHRISTIAN KROHN.

Witnesses:

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JOHN MURTAGH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
